

XP-002303652

1/1 - (C) FILE ZCAPLUS

AN - 2004:209841 ZCAPLUS

DN - 140:218572

TI - Synthesis of trifluorostyrene derivatives as polymer monomers for proton exchange resins

IN - Lu, Long; Hu, Liqing; Zhang, Weixing; Wang, Yi; Li, Wei; He, Yan

PA - Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Peop. Rep. China

SO - Faming Zhuanli Shenqing Gongkai Shuomingshu, 13 pp.
CODEN: CNXXEV

DT - Patent

LA - Chinese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PN - CN1349962

A

20020522
20011102

CN 2001-132099

20011102

PRAI- CN 2001-132099

OS - MARPAT 140:218572

AB - The title monomers are trifluorostyrene derivs. having meta-C2-6 perfluoroalkyl or/and meta-(CF₂CF)nOCF₂CF₂SO₂F (Rf) (n=1-4) groups and are synthesized by steps of (1) coupling iodobenzene with iodofluoroalkane derivs. in the presence of Cu at 60-120.degree. for 15-40 h; (2) nitrating the intermediate with HNO₃/H₂SO₄ at 30-60.degree. for 15-40 h, (3) reducing with SnCl₂.cntdot.2H₂O/concd. HCl at 30-80.degree. for 0.5-2.0 h to m-Rf-aminobenzene, (3) diazotizing at -5.degree. for 1.0-5.0 h, substituting with KI at 45-75.degree. for 0.5- 2.0 h to obtain m-Rf-iodobenzene, and (4) coupling the compd. with CF₂=CF₂ZnBr in the presence of palladium-based catalyst. The monomers can be used for the proton exchange resin for the proton exchange membrane of fuel cells.IT - ***664327-26-8DP***, sulfonated
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(prepns. of proton exchange resins from trifluorostyrene derivs. bearing meta-perfluoroalkyl substituents)

RN - 664327-26-8 ZCAPLUS

CN - Ethanesulfonyl fluoride, 2-[[[1,1,2,2,3,3,4,4,5,5,6,6-dodecafluoro-6-[3-(trifluoroethenyl)phenyl]hexyl]oxy]-1,1,2,2-tetrafluoro-, polymer with (trifluoroethenyl)benzene and 1-(trifluoroethenyl)-3-(trifluoromethyl)benzene (9CI) (CA INDEX NAME)

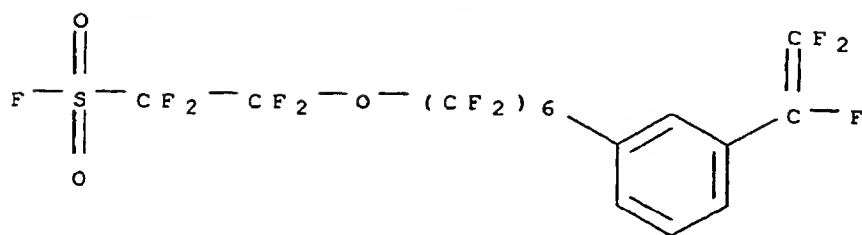
CM 1

CRN 664327-21-3

CMF C16 H4 F20 O3 S

BEST AVAILABLE COPY

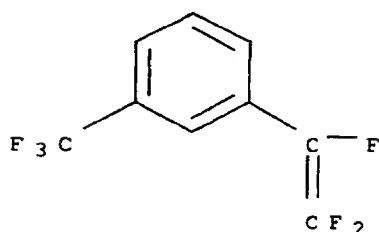
02.11.2004 15:37:37



CM 2

CRN 82907-02-6

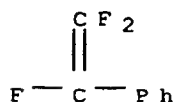
CMF C9 H4 F6



CM 3

CRN 447-14-3

CMF C8 H5 F3



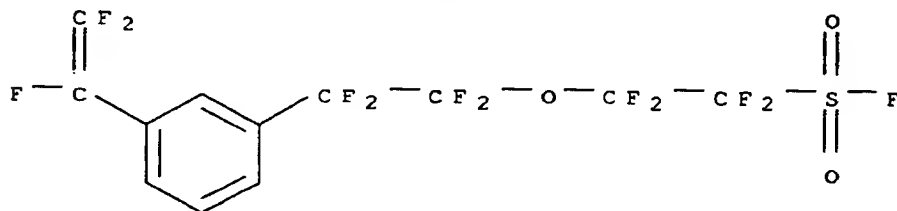
IT ***664327-25-7P***

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)

(prepns. of trifluorostyrene derivs. bearing meta-perfluoroalkyl
substituents as polymer monomers for proton exchange resins)

RN 664327-25-7 ZCAPLUS

CN Ethanesulfonyl fluoride, 1,1,2,2-tetrafluoro-2-[1,1,2,2-tetrafluoro-
2-[3-(trifluoroethenyl)phenyl]ethoxy]- (9CI) (CA INDEX NAME)



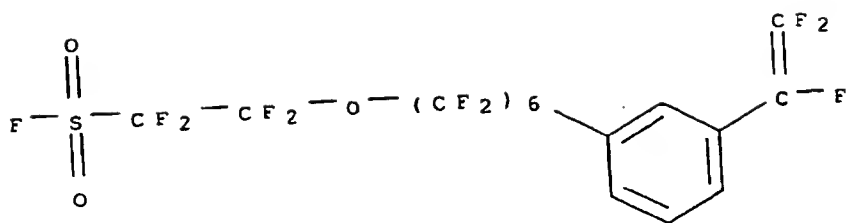
IT ***664327-21-3***

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepns. of trifluorostyrene derivs. bearing meta-perfluoroalkyl
substituents as polymer monomers for proton exchange resins)

RN 664327-21-3 ZCAPLUS

CN Ethanesulfonyl fluoride, 2-[[1,1,2,2,3,3,4,4,5,5,6,6-dodecafluoro-6-
[3-(trifluoroethenyl)phenyl]hexyl]oxy]-1,1,2,2-tetrafluoro- (9CI)
(CA INDEX NAME)



BEST AVAILABLE COPY

02.11.2004 15:37:39

THIS PAGE BLANK (USPTO)